

## **V. REMARKS**

Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. The claims are amended as suggested by the Examiner to obviate the rejection. Applicants express their appreciation for the Examiner's suggestions. Withdrawal of the rejection is respectfully requested.

Claims 1, 2, 4 and 5 are rejected under 35 USC 103 (a) as being unpatentable over Kumagai et al. (U.S. Patent No. 6,250,600) in view of Umemura et al. (U.S. Patent Application Publication No. 2002/0098091) as evidenced by Shimizu et al. (JP 001153043). The rejection is respectfully traversed.

Kumagai teaches a bellows-type pressure responsive valve that includes a bellows of closed structure as a pressure sensing element. The bellows is adapted to vary an opening amount of the valve by transmitting expansions and contractions of the bellows to a valve body by means of a valve rod which is supported on a valve housing so as to move in a valve lifting direction. A first spherical coupling structure is incorporated at a connecting portion of the bellows and the valve rod. The bellows and the valve rod are spherically connected by means of the first spherical coupling structure.

Umemura discloses a control valve for a variable displacement type compressor. The control valve has a valve housing and a valve chamber defined in the valve housing. A valve body is accommodated in the valve chamber for adjusting the opening degree of a supply passage. A pressure sensing chamber is defined in the valve housing. The pressure at a pressure monitoring point in a refrigerant circuit is applied to the pressure sensing chamber. A bellows is located in the pressure sensing chamber. The bellows has a movable end. A transmission rod is slidably supported by the valve housing. The transmission rod includes the valve body. A support spring is located between the inner wall of the pressure sensing chamber and

the movable end of the bellows. The spring supports the movable end such that the movable end can be displaced. The movable end of the bellows includes a protrusion such that the spring and the movable end of the bellows are fitted to each other.

Shimizu discloses a variable displacement compressor with capacity control mechanism. The variable displacement compressor has several cylinder bores, a crank chamber, a valve plate, a discharge chamber and a capacity control mechanism for controlling pressure in the crank chamber. A swash plate is disposed in the crank chamber and is tiltably connected to a drive shaft. The swash plate is coupled to each of the pistons, so that the pistons are driven in a reciprocating motion within the cylinder bores. A tilt angle of the swash plate is variable depending on pressure in the crank chamber. A gas passage communicates between the crank chamber and the discharge chamber via the capacity control mechanism, which is disposed along with a line extension of the drive shaft. A first end portion of the capacity control mechanism projects into the discharge chamber and has a screw mechanism.

Claim 1 is directed to a control valve for a variable capacity compressor, which comprises a bellows main body retained as a pressure sensing element in a bellows case with an airtight structure and transfers expansion and contraction of the bellows main body in response to a variation in inlet pressure of the variable capacity compressor to a valve element through a valve rod supported to be movable in a valve lifting direction from a valve housing integral with the bellows case to thereby change a valve opening degree. Claim 1 recites that a patch member is provided to a movable-side end portion of the bellows main body and is formed with a fitting recessed portion defining a valve- end receiving chamber extending in the valve lifting direction. Claim 1 also recites that a contacting end portion of the valve rod being fitted to be able to float in the fitting recessed portion and an edge of the contacting end portion of the valve rod is roundly or hemispherically shaped. Additionally, claim 1 recites that the fitting recessed portion is formed such that the patch member can be tilted with

respect to the valve rod and a compression coil spring is disposed between the patch member and a lower patch member for supporting a fixed-side end portion of the bellows main body. Furthermore, the valve housing is formed with a valve rod retaining hole formed therethrough and sized to slidably receive the valve rod in a close-fitting relationship so that a valve contacting end portion of the valve rod contacts the valve element while the contacting end portion of the valve rod disposed opposite the valve contacting end portion of the valve rod contacts the fitting recessed portion, the contacting end portion of the valve rod is sized to be received in the valve-end receiving chamber of fitting recessed portion.

It is respectfully submitted that that none of the applied art, alone or in combination, teaches or suggests the features of claim 1 as amended. Specifically, it is respectfully submitted that the applied art, alone or in combination, fails to teach or suggest an edge of the contacting end portion of the valve rod is roundly or hemispherically shaped. Furthermore, it is respectfully submitted that the applied art also fails to teach or suggest that the fitting recessed portion is formed such that the patch member can be tilted with respect to the valve rod. Thus, it is respectfully submitted that one of ordinary skill in the art could not combine the features of the applied art to arrive at the claimed invention because the applied art is devoid of all the features of the claimed invention. As a result, it is respectfully submitted that claim 1 is allowable over the applied art.

Claims 2, 4 and 5 depend from claim 1 and includes all of the features of claim 1. Thus, it is respectfully submitted that the dependent claims are allowable at least for the reasons claim 1 is allowable as well as for the features it recites.

Withdrawal of the rejection is respectfully requested.

Furthermore, Applicants respectfully request rejoinder of withdrawn claims 3 and 6 to the application because it is respectfully submitted that claim 1 is generic to all species.

Further, Applicants assert that there are also reasons other than those set forth above why the pending claims are patentable. Applicants hereby reserve the right to submit those other reasons and to argue for the patentability of claims not explicitly addressed herein in future papers.

In view of the foregoing, reconsideration of the application and allowance of the pending claims are respectfully requested. Should the Examiner believe anything further is desirable in order to place the application in even better condition for allowance; the Examiner is invited to contact Applicants' representative at the telephone number listed below.

Should additional fees be necessary in connection with the filing of this paper or if a Petition for Extension of Time is required for timely acceptance of the same, the Commissioner is hereby authorized to charge Deposit Account No. 18-0013 for any such fees and Applicant(s) hereby petition for such extension of time.

Respectfully submitted,

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Enclosure(s):       Amendment Transmittal

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